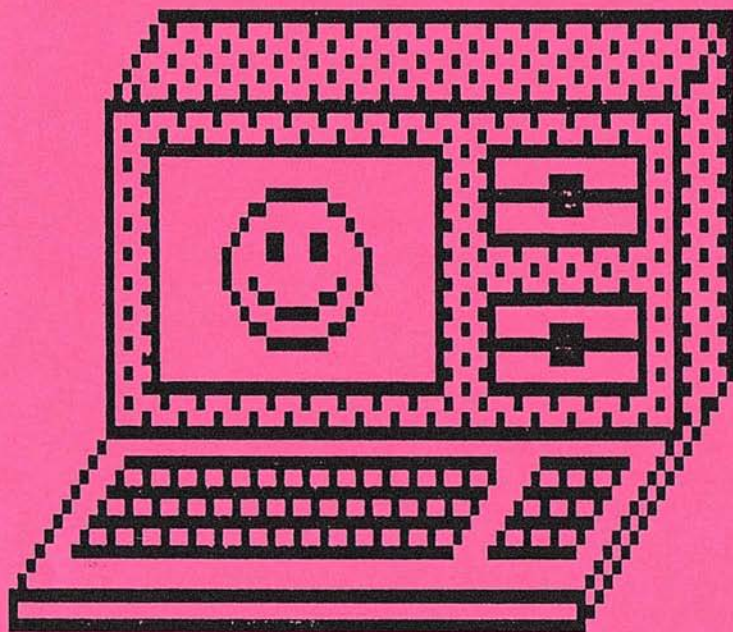


# ATARI COMPUTER CLUB OF OKC INC.

P. O. BOX 32672  
OKLAHOMA CITY, OK 73123  
NEWSLETTER VOL. #VIII ISSUE # 2

## LETS GET BACK TO USING



## OUR COMPUTERS AGAIN!!!

### MEETING AT OKLA. MILITARY DEPT.

3501 MILITARY CIRCLE AT (36TH & GRAND)  
MEETING TIME: 6:15 TO 9:00 PM  
MEETING DATE: SEPTEMBER 8TH, 1987

## PRESIDENTIAL NOTES

By Bob Bewley

Before I start my regular article, I'd like to thank some people that I forgot to thank last month (please excuse me). My first THANKS goes to Murray Steele, he donated a few books and a joystick to the club a couple of months ago. My next THANKS goes to David Fuller, he donated A LOT of magazines to the club (Analog, Atari Explorer, Antic and Compute) at least fifty pounds worth! Hopefully by the October meeting I will have a list of these magazines and anyone who needs, wants or will kill for any of these magazines can have the chance to own them (at least ONE of them). Details will be ironed out at the September meeting.

Now that I got those THANKS out of the way, it's time for the up-to-date THANKS..... First, Thanks to Sharon Jasper for her GREAT demo of AWARDWARE. Maybe we can persuade her to show SPELLACOPTER (sorry if I spelled that wrong) at another meeting. Another THANKS goes to Gerald Burton for his outstanding demo of STARFLEET ONE. John Brandt was unable to show the RAMCHARGER enhancement on the INDUS GT due to his recent move, but maybe we'll see it in the near future (perhaps even this month).

Well, on to the plans for this month's meeting.... At our last officers meeting we discussed a few items which we will bring up for discussion at the next club meeting. The first item will be whether or not to buy a monitor for the club. The second item is a Questionnaire which will be filled out by club members giving information about what equipment you have, main interests, occupation, etc. This information will then be sorted, sifted, condensed, mutilated, folded and spindled with the final result being a list of members with related information that can be used by other members to seek out people with the same interests, equipment, etc. This could be very helpful if you are having trouble with something on your system, you can find out who else has the same equipment, contact them and see if they have ever had the same or similar problem. I believe that this will bring the members closer together and become less afraid of trying new things on their computer.

1060	BNE TXTWDD	1540	STA \$0300,X
1070	LDX DINDEX	1550	INX
1080	CPX #3	1560	CPX #12
1090	BCC TXTMOD	1570	BCC RSTDCB
1100	LD2 TXTMSC	1580	PLA
1110	TXTWDD LDX #3	1590	STA SCRND+1
1120	TXTMOD ST2 SCRND	1600	PLA
1130	LDA ROWTBL,X	1610	STA SCRND
1140	STA ROW	1620	JMP \$E462
1150	LDY COLTBL,X	1630	OUTSUB CLC
1160	NXTLN TYA	1640	TXA
1170	PHA	1650	ADC # <SIOBUF
1180	LDX #40	1660	STA \$0304
1190	CLRBUF DEY	1670	LDA # >SIOBUF
1200	BMI OUTPUT	1680	ADC #0
1210	TSTCH LDA (SCRND),Y	1690	STA \$0305
1220	BEQ CLRBUF	1700	LDA #80 ;Output block
1230	CNVLN LDA (SCRND),Y	1710	STA \$0303
1240	BIT BIT6	1720	JMP \$E459
1250	BNE ADJ1	1730	ROW += ++1
1260	EOR BITS	1740	SIOBUF += ++40
1270	ADJ1 BIT BITS	1750	.BYTE \$9B,"
1280	BNE ADJ2		
1290	EOR BIT6	1760	ROWTBL .BYTE 24,24,12,4
1300	ADJ2 DEX	1770	COLTBL .BYTE 40,20,20,40
1310	STA SIOBUF,X	1780	BIT6
1320	BNE ADJ3	1790	PRDTCB .BYTE \$40,1,'W
1330	JSR OUTSUB	1800	BITS .BYTE \$20
1340	BMI SKIP	1810	.WORD SIOBUF
1350	LDX #40	1820	.BYTE 9,0,40,0,'N,0
1360	BNE OUTPUT ;Unconditional	1830	; This part is executed at load
1370	ADJ3 DEY	1840	; time only and will be deleted
1380	BPL CNVLN	1850	; afterwards. This routine
1390	OUTPUT JSR OUTSUB	1860	; stores the contents of DOSINI
1400	SKIP CLC	1870	; into the JSR TROJAN instruc-
1410	PLA	1880	; tion. It then replaces DOSINI
1420	TAY	1890	; with a new value, location
1430	ADC SCRND	1900	; TROJAN.
1440	STA SCRND	1910	END MOVE2 VBX+1,VVBLKD
1450	BCC NOINC	1920	MOVE2 NORMAL+1,VKEYBD
1460	INC SCRND+1	1930	MOVE2 TROJAN+1,DOSINI
1470	NOINC LDA \$0303	1940	DPOKE DOSINI,TROJAN
1480	BMI RESTORE	1950	JMP INIT
1490	DEC ROW	1960	*= \$02E2
1500	BNE NXTLN	1970	.WORD END
1510	RESTORE LDX #0		
1520	STX PRFLAG		
1530	RSTDCB PLA		

( Anyway, that was some of the ideas that WE came up with..... I hope that we can get some more ideas from YOU. Remember, YOU are the reason that we have these meetings and if YOU are not satisfied with what goes on at the meeting I hope that YOU will say something to me. I really enjoy planning and conducting these meetings and I hope it's not ALL in vain. If anyone of you would like to see a particular piece of hardware or software demonstrated at the meeting, PLEASE let me know and I'll do everything in my power to get it for you. After all, if you're interested in seeing it, chances are that several other people would like to see the same thing (only they're too shy to ask).

Some of you new members (or old members) may not know that if you have something to sell or trade you can advertise in this newsletter for FREE! Just submit the pertinent information to the editor (either at the meeting or by telephone) and it will magically appear in the next newsletter. Also, if you run across any special sales or informative articles, PLEASE let us know about them at the meeting. Most of our door prizes are the result of information which I receive from other members or officers or I just happen to stumble upon them in the store. So be sure to keep your eyes and ears open for ATARI bargains!

If times permits at the next meeting, I will show an ( RI Trak Ball and/or WICO Joystick and/or ATARI Touch Tablet. Just some of the helpful gadgets you can purchase for your enjoyment. So until then, KEEP THOSE ARTICLES AND DEMOS COMING!!!

See you at the meeting.

## BONDS, BILLS, AND NOTES FROM THE TREASURY

By Richard Rhea

I have really been besieged these past several weeks by my first exposure to the Atarian's most feared of times: Those dreaded summer doldrums! With all of the usual summertime activities in full swing, I admit I have found myself neglecting "Myrtle" (my computer, not my wife!). I can only hope for cooler weather to help snap me out of these doldrums and put me back at my desk computing.

Oh well, be that as it may, this month's Treasury Report still looks good with a slight increase in the balance over last month. Credits included healthy sales of the Disk-of-the-Month, D-O-M coupons and blank disks. We had debits again relating to the newsletter and for door prizes. At the last officer's meeting, It was felt that the Club's finances and cash flow were adequate enough to consider the purchase of additional equipment for the Club, the details of which will be discussed at this month's meeting.

I would like to thank the following people for their new membership or renewal of an existing membership for the new Club year during the sign-up period these past two months.

JULY: Sharon Jasper, Bill Hoag, Gerald Burton, Randy Mcconnell, David Wolbrette, George Morse Jr., Jerry Rich, Delmer and Becky Pound, Bob Bewley, Bob Griffith, Fred Jones, John Brandt, Dale Jencks, Bob and Donna Merry, Tom and Louise Holden, Virgil Holden, Pat Rice, Richard Rhea, Leroy Schultz, and Murry Steele.

August: Dave Archer and Don McDown.

Hope to see you all at the meeting!

TREASURER'S REPORT  
AUGUST 1987  
By Richard Rhea

BEGINNING BALANCE\*\*\*\*\*>>> \$519.91

DEBITS \$ 88.18

Printing	\$ 26.18
Mailing	\$ 22.00
Prizes	\$ 40.00

CREDITS \$ 96.00

Dues	\$ 30.00
DOM	\$ 40.00
DOM Coup	\$ 20.00
Disks	\$ 6.00

ENDING BALANCE\*\*\*\*\*>>> \$527.73

## EDITOR'S CORNER

By George Morse

Well another month has passed and summer is nearly over now. The kids have returned to school and our summertime activities are starting to wind down. It's time now to get back to some serious computing again.

Last months meeting was quit informative to most everyone that was there. I would like to thank all of those who participated in the demo's and encourage all members to share their software and hardware knowledge with us at our meetings.

After seeing Bob demo the happy drive, I'm convinced that's the way to go for a second drive. If you weren't at the last meeting you also missed out on an excellent presentation of AWARDWARE by Sharon Jasper. This software package is now available from Computer Direct for \$9.95. For all of you game buffs that were not at the last meeting, you also missed out on Gerald Burton's demo of STARFLEET ONE.

Enclosed in this months newsletter are the answers to last months puzzle by Tom Holden as well as a new Word Find puzzle.

One last note, when typing in line # 1750 of John Brandt's program SHIFT-ATARI you need to insert 39 spaces between the "QUOTES".

SEE YOU AT THE MEETING.

## LIBRARIAN'S CORNER

By Fred Jones

It's time for one more letter from the ACCOKC librarian. The month of August has been a real dandy, I'll be glad when summer is really over and things can finally get back to normal.

The disk of the month for September will be mostly games from Antic and Analog magazines. I have a couple of games that haven't been printed, they are just extras that there was no room to publish in the magazines. All instructions for the disk of the month files will be in the Help file on disk. I don't have easy access to free xerox copies.

There were some DOM's last month that didn't get copied correctly. If you have one, then bring it to the meeting for a replacement copy.

>>> AUG WORD FIND by Tom Holden <<<

WORD LIST

ACCOKC	ANALOG	ANTIC	ATARI
ATARI BASIC	BBS	BINARY	BOB BEWLEY
CHIP	CLUB	CPU	INTERGRATED CIRCUIT
COMPUTER	DEMO	DISK DRIVE	DISK-OF-THE-MONTH
DOS	FRE(0)	GEORGE MORSE	GOSUB
GOTO	HAPPY	INDUS	LIBRARIAN
MICRO-SOFT	PASSWORD	SYNCALC	SYNFILE
PACKMAN	PRINTER	LIBRARY	MONITOR
UTILITY	SARGON	MODEM	PRINT
MULE	RAM	ROM	LIST

A N A L O G I I N D U S W I N X N U D F  
 A J N O G R A S S J T F C Q P Q I I T G  
 U M U L E W N A M F H O J A J D S I E P  
 K B U S O G T F A K M L C F X K U O A B  
 B Y Y T I L I T U P C K C G - C R S H O  
 O I L S A B C B U P M I B O R G S A L A  
 B O T O G M H T U A S I F I E W C I T R  
 L I S T L E P N A N - C O C B A H A  
 B D O A U R E C B A T M R O R R A C  
 E I C H I P S R H D O D K A I P L V P  
 W S X S I A I Y E E R Q C R Q P U F S N  
 L K P A B R A - T S P W Y O Y B B A G A  
 E J V A B M A E X W D O R A M E U O I  
 Y D Q T X O R G M I C R O - S O F T L R  
 H R A J N G W D Q Q K Q S Y N C A L C A  
 N I B T R S E H H D U ) O ( E R F M A R  
 A V H E N M O G N M E D O M E S V O B B  
 Y E T E O J B D P Q E L I F N Y S R A I  
 H N T N I R P Y G M P R I N T E R L A L  
 I H O R U W T K G R O T I N O M B U U P

## SHIFT-ATARI

By John Brandt

It happens occasionally. You have something on your monitor screen that you want a paper copy of, but the Atari doesn't give you any way to print it out. The last time it happened to me, I could hear the echoes of IBM fans everywhere: "If you'd move up to a REAL computer, you'd have a PrtSc (print screen) key!" Well, going to an IBM seemed like an awfully extreme (and expensive) way to get a PrtSc key, so I decided to see if I could write a program that would give my computer a PrtSc key.

The first decision I had to make was: which key or combination of keys would I use as the PrtSc key? I rejected anything involving the Start, Select, or Option keys, because too many programs use those already. Anything involving Help was out too, because not everyone uses an XL or XE. Anything on the CX85 keypad was also out because even fewer people have one of those. Ctrl-Shift-P sounded good, but both Action! and PaperClip use that key combination to mean "Paste." I finally decided on Shift-Inverse because on the XL's, the Inverse key is in the same place on the keyboard as IBM's PrtSc key, and because I've never heard of any software that uses Shift-Inverse for anything.

I knew that in order to make Shift-Inverse do something besides what it does normally (which is the same thing as plain Inverse), I would have to write a "keyboard interrupt" handler. This is a special machine-language program that gets control whenever a key is pressed. I could then compare each keystroke against the code for Shift-Inverse and print the screen when it matched. But since most printers are on the serial bus, you have to use Atari's SIO (serial I/O) routine to print anything, and this causes problems. SIO is interrupt-driven, and I was going to call it from an interrupt routine! I knew this would work if I re-enabled interrupts, but first I would have to set a "PrtSc active" flag in case someone got impatient and hit Shift-Inverse while the screen was still printing. I would also have to make sure I ignored Shift-Inverse if SIO were already in progress. Even with these precautions, I was worried about what would happen if the Atari were in a deferred VBLANK (vertical-blank) routine when I hit Shift-Inverse. Since it would obviously take more than 1/60th sec. to print the

screen, the next VBLANK interrupt would cause the routine to be re-entered from the beginning, and it wasn't designed that. I could suppress further deferred VBLANK processing (and thus avoid the problem) by setting an OS flag called CRITIC, but wouldn't you know: CIO sets CRITIC itself on entry (which causes no problem) and clears it upon exit (which does cause a problem).

After pondering several ways around this, I decided the best solution was to make the routine which would actually print the screen a deferred VBLANK routine itself. The keyboard interrupt routine would just set a flag which the print-screen routine would test. This way, I wouldn't have to hold the interrupt for more than a few microseconds, and I wouldn't be re-enabling interrupts anyway, so there was no chance of a problem with VBLANK. And if I hit Shift-Inverse during serial I/O, the print-screen function would merely be deferred rather than ignored.

The following program is the result of my efforts. It's written for the MAC/65 macro assembler from OSS, but the code can easily be modified for the Atari macro assembler or even the old assembler/editor cartridge. I decided to call it Shift-Atari, which is !Kungese for "Print Screen." (Seriously, the name Shift-Atari arises from the fact that on the old 400's and 800's, the Inverse key is marked with Atari's familiar fuji symbol, so on these computers, it's called the "Atari" key.)

This program's initialization routine places the address of the normal keyboard interrupt and VBLANK routines into JMP instructions contained in our new routines, then changes the OS interrupt vectors to point to our routines. Thus, when a key is pressed, the Atari jumps to our keyboard routine instead of its own. Our routine then checks for the Shift-Inverse key combination. If Shift-Inverse wasn't pressed, it simply jumps to the original routine. Otherwise, it sets the print-screen flag and then exits.

The VBLANK routine works by first checking the flag. If the flag is not set, or if it indicates that a print-screen is already in progress, then it merely exits to the old routine. Otherwise, it changes the flag to indicate that a print-screen is in progress and begins work. It checks the current screen mode to determine the starting address of the text and the number of rows and columns. Then it reads a line directly from screen memory, converts it to ASCII, and writes it to the printer using Serial I/O. This process is repeated

til either an error occurs or all rows have been printed. Finally, it clears the flag and exits.

In split-screen GRAPHICS 1 or 2, this program will print either the graphics window or the text window, depending on which was last written to. In GRAPHICS 3 and up, it will always print the text window (which exists even in full-screen modes, even though it is not displayed).

The source code above is designed to assemble at address 1F00 hex. Because of the wide variety of DOSes used by our members, however, this may not be right for you. Therefore, the assembled version I've placed on the club library is a "relocatable" version. It contains a "loader" program which will automatically place this program in memory at LOMEM. The loader itself, however, uses page six! I intend to publish more programs using this loader, so if you insist on using page six for your own resident programs, make sure you load my programs first. After my programs load, page six may be used freely again.

This program can be loaded in several ways: With most DOSes, it can be concatenated into an AUTORUN.SYS file. With Top-DOS, it can be autobooted by naming it PRTSC.AUT or the like. It can also be loaded from the DOS menu or command level. Unfortunately, it doesn't seem feasible to load this program with boot disks such as SynCalc or PaperClip. (PaperClip should have been a binary file, since it's key protected, not copy protected.) I recommend using this program with Top-DOS, DOS XL or the older OS/A+, because it doesn't work with SpartaDOS yet (I'll fix that as soon as I figure out why) and many menu-driven DOSes (including Atari DOS 2.0S and 2.5) completely ignore LOMEM when loading DUP.SYS and are likely to overwrite this program, causing a crash on the next VBLANK. This program can still be used with such DOSes if the menu is never called, as would be the case with, e.g., Atariwriter. It can also be used with programs such as S.A.M. or Microsoft BASIC, which push LOMEM up ABOVE DUP.SYS, as long as MEM.SAV is not invalidated. (Top-DOS is OK because its DUP.SYS file loads at a high enough address to give you a margin of safety.)

This program gives a high priority to print-screen requests, so you can safely print a screen while loading or saving a file or running a long program, but beware: If you press Shift-Inverse during a printout, you'll get your print-screen right in the big middle of it. One last hint: The BREAK key can be used to abort a screen print request.

```

0100      .OPT NO MLIST
0110      .MACRO LD2
0120      LDA Z1
0130      LDY Z1+1
0140      .ENDM
0150      .MACRO ST2
0160      STA Z1
0170      STY Z1+1
0180      .ENDM
0190      .MACRO MOVE2
0200      LD2 Z2
0210      ST2 Z1
0220      .ENDM
0230      .MACRO DPOKE
0240      LDA # <Z2
0250      LDY # >Z2
0260      ST2 Z1
0270      .ENDM
0280 ;
0290 ; EQUATES
0300 ;
0310 VKEYBD = $0208 ;Keyboard vector
0320 VVBLKD = $0224 ;Def vert blk v
0330 KBCODE = $D209 ;Pokey register
0340 SETVBV = $E45C ;Set vert blk v
0350 CH1 = $02F2 ;Last key pressed
0360 KEYDEL = $02F1 ;Keybounce counter
0370 DINDEX = $57
0380 SAVMSC = $58
0390 SWPFLG = $7B
0400 TXTMSC = $0294
0410 DOSINI = $0C ;DOS initialization
0420 SCRNAS = $C0
0430 LOMEM = $02E7 ;Bottom of memory ptr
0440 INVERSE = 39 ; for these
0450 ; This routine is permanent,
0460 ; i.e., it needs to be resident.
0470 ; The system DOSINI vector has
0480 ; been stolen and stored in the
0490 ; address portion of the
0500 ; JSR TROJAN instruction. So,
0510 ; when [RESET] is pressed,
0520 ; DOSINI vectors to TROJAN, and
0530 ; LOMEM is reset to its new val-
0540 ; ue after JSR TROJAN calls the
0550 ; DOS initialization routines.
0560      *= $1F00
0570 PRTFLAG *= ++1

0580 TROJAN JSR 0
0590 INIT LDA #0
0600      STA PRTFLAG
0610      DPOKE VKEYBD,NEWPROCEDURE
0620      DPOKE LOMEM,END
0630      LDA #7 ;Reestablish
0640      LDY # <VBL ; vertical blank
0650      LDX # >VBL ; routine
0660      JMP SETVBV
0670 ;
0680 ; ENTRY POINT
0690 ;
0700 ; New keyboard interrupt handler
0710 ;
0720 NEWPROCEDURE
0730 ;
0740      LDA KBCODE
0750      CMP #$40+INVERSE
0760      BNE NORMAL
0770      STA CH1 ;last key
0780      LDA PRTFLAG
0790      ORA #1
0800      STA PRTFLAG
0810      PLA
0820      RTI
0830 NORMAL JMP 0
0840 ;
0850 ; Vertical blank routine
0860 ;
0870 VBL LDX PRTFLAG
0880      DEX
0890      BEQ PRISC
0900 VBX JMP 0
0910 PRISC DEX
0920      STX PRTFLAG
0930      LDA SCRNAS
0940      PHA
0950      LDA SCRNAS+1
0960      PHA
0970      LDX #11
0980 SAVEDCB LDA $0300,X
0990      PHA
1000      LDA PRISCB,X
1010      STA $0300,X
1020      DEX
1030      BPL SAVEDCB
1040      LD2 SAVMSC
1050      LDX SWPFLG

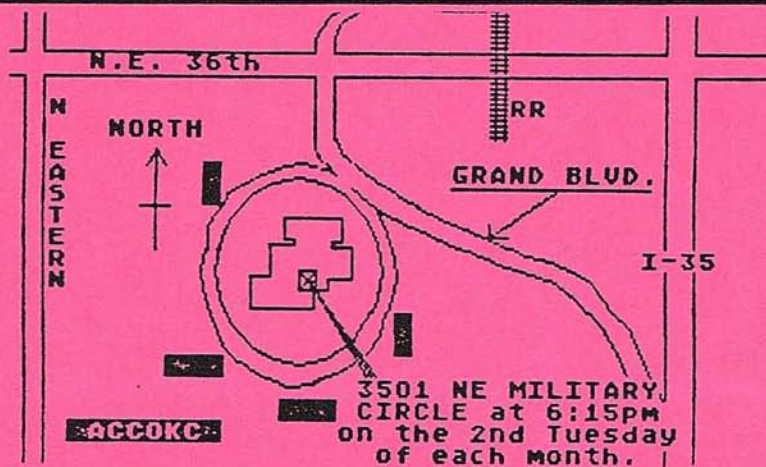
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For help or information call:  
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 Sec/Treas: Richard Rhea 691-4562  
 Librarian: Fred Jones 677-0151  
 Editor : George Morse 942-5819



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 SAN LEANDRO, CA. 94577



ANSWERS: BY TOM HOLDEN

HALO AQUADAG FUSE A  
 Y D PHOSPHORESCENCE ROMA I R  
 S I H R I U T M H  
 E FLUORESCENCE HO R  
 R F T OK D T NEON  
 E R OR N RELAY S M  
 STATC PI D O TAU  
 I C O C Y N  
 S T SNOW DYNAMOTOR T  
 DIG D E I NU  
 O MU QUADRATURE N  
 TON C T U S A ME  
 R SIT E GETTER D  
 LB INVAR A EYE  
 A B V O PITCH S  
 GRAPHECHON H I W A  
 LI HO I COULOMB  
 GAUSS IMAGE H W I  
 NOSE E FRAHM ON